

The corrections for the chronograph are the same as before.

Notes.

(94) Very difficult; uncertain to about $\pm 1^s$.

(95) Very difficult; about 1^s late.

(82) This star reappeared suddenly, and was duly chronographed at $23^h 9^m 50^s.0$, but it was hidden so quickly afterwards by clouds, as to leave a doubt of its having been seen. On its again becoming visible 20^s later, a second signal was given. There seems little doubt that the earlier record marks the actual reappearance.

(85) Observation fairly good, but sent the signal 1^s too late.

(81) Fairly good.

(109) Good. No. 108 was too faint to attempt an accurate observation; it disappeared almost immediately after 109.

Anon. (106a). Observation good. The approximate place from a single observation is

$$\alpha = 11^{\circ} 49'8, \delta = +4^{\circ} 7'6.$$

No. 107 was missed, and at the time of the disappearance of 106 the field of view was so strongly lit up by the partly illuminated Moon, that neither this star nor any of the others that had already reappeared could be seen.

Lord Crawford's Observatory,

Dun Echt:

1884, Nov. 13.

Total Eclipse of Moon, Oct. 4, 1884. By the
Rev. S. J. Perry, F.R.S.

This eclipse was observed at Stonyhurst under very favourable circumstances, although the heavy dew interfered occasionally with the definition of the telescopes.

With a good binocular the Moon's disk was easily seen throughout the whole of totality, but to the naked eye there was no outline, the Moon having the appearance of a bright patch of light. The usual copper tint of the eclipsed Moon was not perceived except towards the close of the eclipse, and then it was only very slight. The general appearance in the binocular was that of a dull white ball, rather more brilliant at one part of the surface than elsewhere. The telescopes used were two Equatorials of 8 and 4 inches, a $9\frac{1}{2}$ -inch Cassegrain, and a 7-inch Newtonian. The nature of the phenomena does not appear to admit of any great accuracy in the contacts.

Observations.	G.M.T.	Observer.	Instr.	Remarks.
First contact with shadow	^h 8 ^m 15 ^s 20·4	S. P.	8-in.	Def. poor.
"	8 16 31·0	J. R.	Cassegrain	"
Beginning of totality	9 18 52	A. M.	4-in.	
"	9 19 30·8	J. R.	Cassegrain.	
End of totality	10 46 6·3	"	"	A little late.
"	10 46 31·5	S. P.	Binocular.	Fair.
Last contact with shadow	11 48 45·9	J. R.	Cassegrain.	
"	11 48 52·1	A. C.	Newtonian.	
"	11 49 54·2	S. P.	Binocular	Limb still charred.

The following stars were occulted :—

Döllén's No.	G.M.T.			Observer.	Instr.	Remarks.
	Disappearance.	Reappearance.				
	^h ^m ^s	^h ^m ^s				
81	9 36 41·6	10 35 4·5	W. C.	8-in.		
81	9 36 53·2		A. M.	4-in.		Fair.
82	9 22 36·0		W. C.	8		(Some uncertainty as to star.
85	9 24 23·8	10 31 38·5	W. C.	8		Good.
94	10 8 44·6		S. P.	8		
95	10 13 27·2		S. P.	8		
106	10 43 35·9		J. R.	Cassegrain.		
106	10 43 35·9		A. C.	4		Difficult.
109	10 36 50·2		J. R.			
109	10 36 57·2		A. C.			Poor.
Unknown.	9 35 6·3		W. C.			45° 10' from N.

The initials stand for A. Müller, A. Cortie, W. Carlisle, J. Rooney, and S. Perry.

Stonyhurst Observatory:
1884, Nov. 8.

*Occultations Observed during the Total Eclipse of the Moon, 1884,
October 4, at Harrow. By Lieut.-Col. G. L. Tupman.*

I used the 4½-inch Cooke Refractor which is fitted with position-circle and bar eyepiece, power 66, extremely convenient for occultations. Scarcely any of the stars on M. Döllén's list could be seen before the Moon was totally immersed, and, even during the period of the greatest obscuration, stars of about the tenth magnitude became extremely faint when within a second of arc of the Moon's limb, owing to the brightness of the latter. The